



Cable Management System

for Electric Vehicle Charger SLIM 100

Installation instruction

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1 Document management

1.1 Change history

Date	Document Version	Created	Approved	Changes
22.01.2025	00	JMi	JMi	Initial version

1.2 About this instruction manual

This document describes the procedure of cable management system (CMS) installation on the SLIM 100 electric vehicle charger.

1.1 Safety instructions

All safety instructions in this manual are based on the results of the risk assessment carried out in accordance with the Machinery Directive 2006/XX/EC Annex I and EN ISO 12100. Where applicable, the life cycle phases of the product were taken into account.

WARNING



Electric shock

Danger of electric shock or injury.

- Turn OFF power at the main distribution board before working inside the equipment or removing any component.
- Do not remove circuit protective devices or any other component until the power is turned OFF.
- Do not come into contact with electrical voltage.

WARNING



Injury through suspended load or lifting equipment

Persons in the vicinity of the installation site immediately before the SLIM100 being installed can be injured by lifting equipment or suspended loads. Secure the installation site against unauthorised access.

WARNING

Fire through overheating of terminals

Damaged or improperly connected terminals can cause electric sparks and overheating.



- Use contact paste
- Apply correct torques to terminals.
- If there are any signs of overheating, the charger must be shut down and repaired.

WARNING

Electric shock

Risk of electric shock through incorrect identification of wires or wire colours.



- Follow instructions when connecting wires.

WARNING

Electric shock

Risk of electric shock during measuring of voltage on uncovered leads.



- Wear electrician's gloves.

WARNING

Electric shock

Risk of electric shock through insufficient grounding of local grid.



- Before starting work, ensure that the local grid is sufficiently grounded.

WARNING

Electric shock from enclosure

Risk of electric shock from enclosure through insufficient grounding of enclosure and doors.



- Before starting work, ensure that the enclosure is sufficiently grounded.

WARNING

Electromagnetic field

Electromagnetic fields can interfere with cardiac pacemakers.



- Wearers of pacemakers should not stand too close to the control panel and the RFID reader.
- They should not stay near the charging cabinet longer than necessary.

WARNING



Eye damage from arc flash

Opening or closing a circuit breaker can cause an electric arc. The high-intensity light can damage the eyes.

- Do not look at a circuit breaker when it is opening or closing.

CAUTION



Tripping over charging cable

Charging cables pose a trip hazard.

- Secure cables when they are not in use.
- Pay attention during charging.

CAUTION



Electric-arc flash hazard

Risk of burns from sparks or an electric arc caused by phases being connected to the wrong terminals.

- Follow the labels printed on the devices.
- Pay attention.

CAUTION



Electric shock

Risk of electric shock from meter.

- When working on the meter, wear electrician's gloves.

CAUTION



Injuries through being struck by falling objects

Loose equipment or quickly deposited tools may fall and cause injury.

- Ensure that you have enough room to carry out your work.
- Put tools away securely.
- Keep the workplace tidy.

1.2 Safety precautions

The following safety precautions must be followed:

- Read the manual before installation or using the CMS.
- The CMS must be installed by a trained technician according to the safety instructions and work instructions in this manual.
- The SLIM 100 charger must be switched off before the CMS installation.
- Do not put tools, material or body parts into the electric vehicle connector.
- The SLIM 100 must be powered up after installation to avoid condensation within the housing.

- Any repair of the CMS must be conducted by Delta, authorized service partner or Delta trained personnel. Otherwise, the guarantee is void.
- To avoid damage by lightning, local regulations must be followed.

1.3 Recommended tools

The following tools are recommended for the EV Ultra-fast charger installation:

- Key for opening of EVC right / left doors
- Wrench size 16 (or ratchet with socket) - to unscrew M10 HEX in hinges
- Wrench size 13 (or ratchet with socket) - to eventually tighten 4xM8 nuts on inner side of belt
- Wrench size 55 or adjustable wrench - to eventually tighten pipe subassembly to spring fastener
- Allen key 6 or bit HEX 6 (to tighten M10 HEXI FLAT screw on the bottom, under the spring fastener subassembly)
- Bit TORX T15 to eventually tighten screws M5 in the cable clamps

2 Product description

Cable Management System (CMS) for SLIM 100 charger consists of two cable holder assemblies. The main goal of CMS is to give the relief to the client in usage of the heavy charging cables and to prevent of long charging cables laying on the ground. The benefit is the reduction of risks of cable damage, the lowering of probability of personal injury and the increase of the user experience. CMS is shown in the following figure:

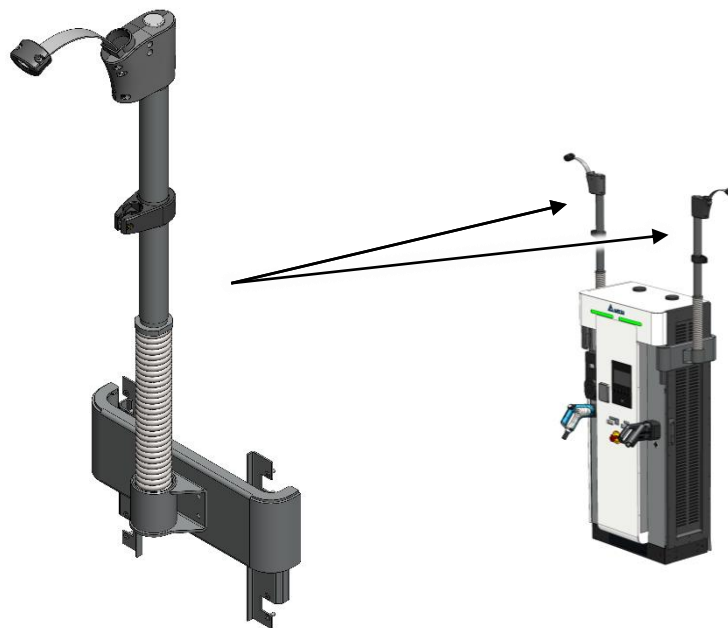
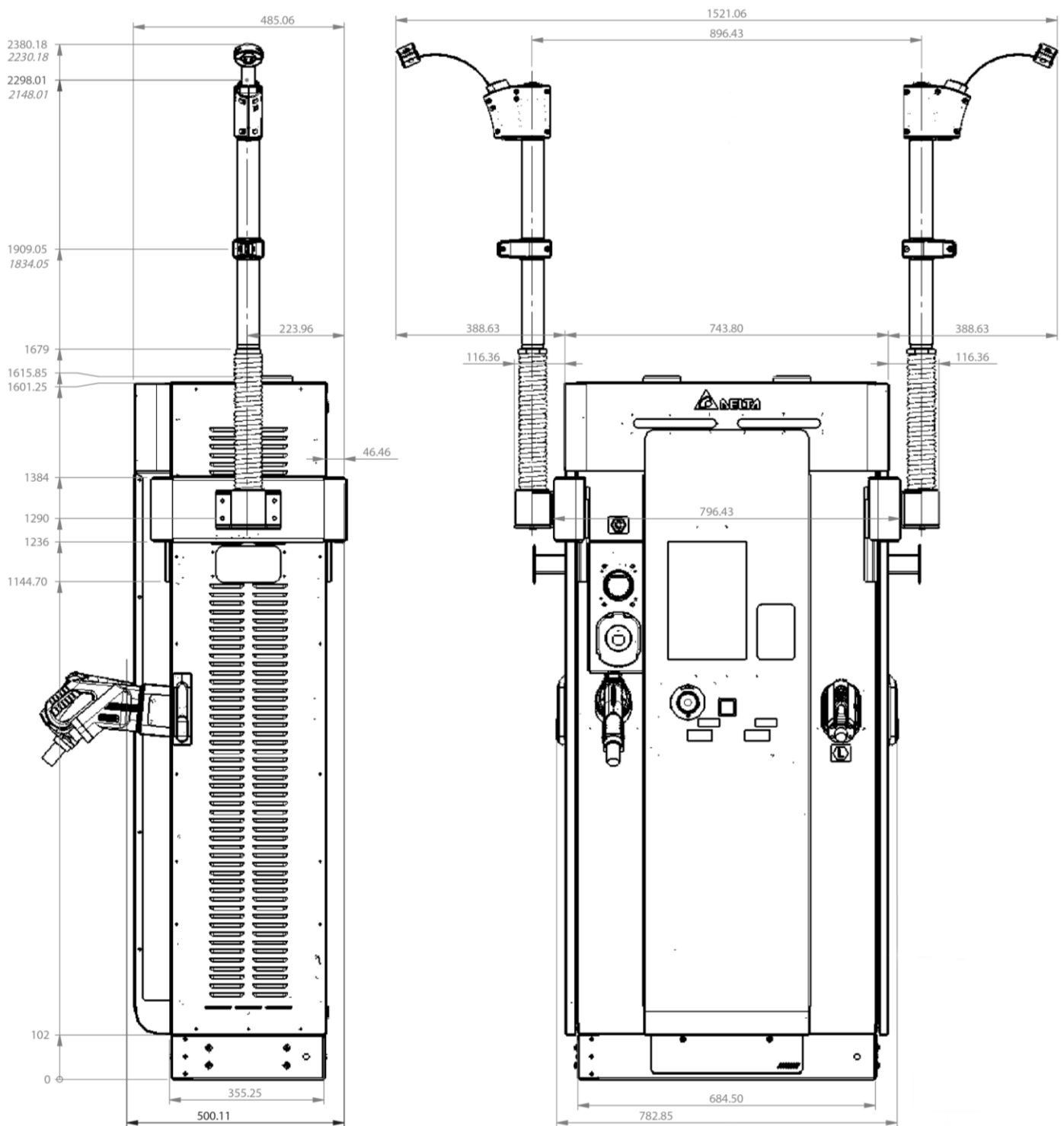


Figure 1. Cable Management System (on the left) mounted on the SLIM 100 charger

Note: There are two CMS versions, shorter (part number 3798107218) and longer (part number 3798107217). This instruction manual is applicable for both CMS versions.



Note: The dimensions in italic are valid for short CMS (PN: 3798107218-S)

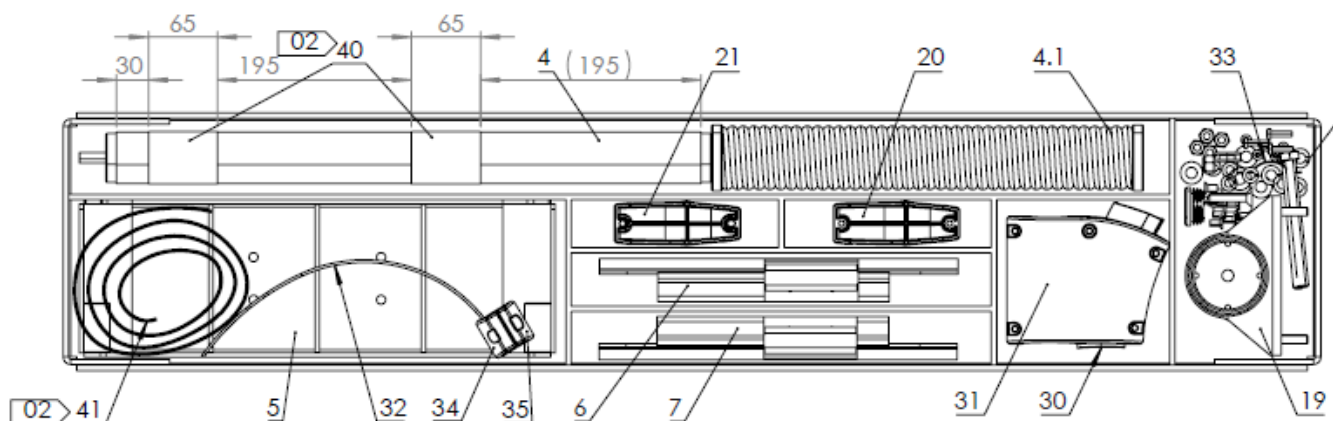
Figure 2. Drawing of CMS and SLIM100

3 Package contents

The package 3527920800 (PML CMS + PACKING) containing items shown in table below:

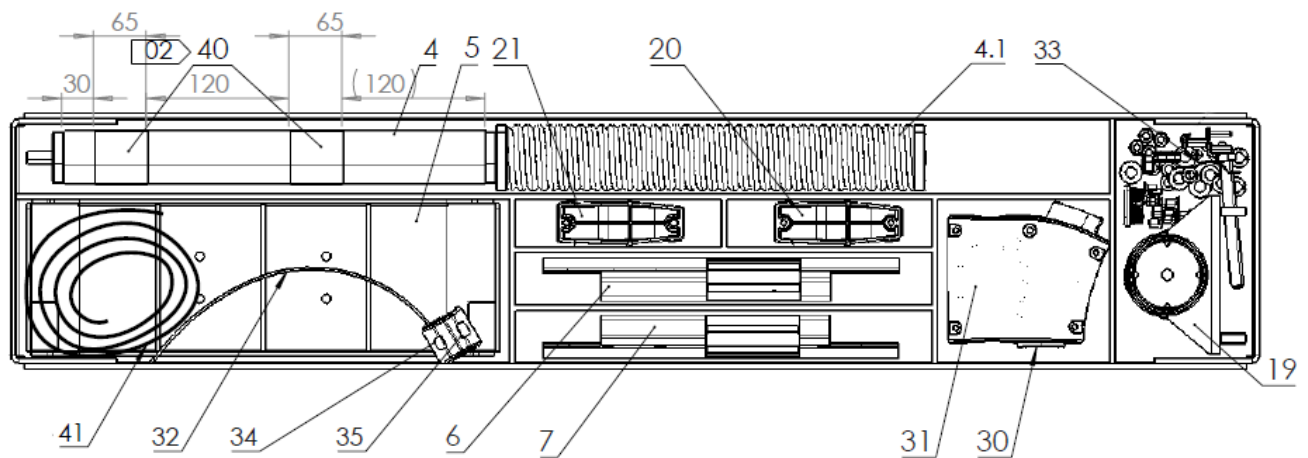
PART NUMBER	DESCRIPTION	QTY
3798107217	CMS SLIM100SPRING BOX	1 pc.
3798107218	CMS SLIM100SPRING SHORT	1 pc.

Table 4: Packing – item numbers and quantity.



ITEM NO.	PART NUMBER	DELTA SAP NUMBER	DESCRIPTION	MATERIAL	STOCK SIZE	WEIGHT	VENDOR	QTY.
4	Spring-fastening assembly-OD60mm-V3-Packaging	3902540500	-	-				1
4.1	Spring subassembly 4.1 from wire D11 "Spring-assembly-OD60-V4"	3902539800	-	-				1
5	Belt-fastening-PEM-ver2	3902541100	-	-				1
6	Fastening-part1-door-PEM-ver2	3902543500	-	-				1
7	Fastening-part2-door-PEM-ver2	3902543600	-	-				1
19	Spring-fastener-OD60mm-V3	3902540300	-	-				1
20	Z1147721	3471848800	CABLE CLAMP EVC PIPE48 CABLE32 INSERT	Grilon BG-30 S Natural black				1
21	Z1147785	3471848900	CABLE CLAMP EVC PIPE48 CABLE32	Grilon BG-30 S Natural black				1
30	Z1150014	3476529800	CABLE HOLDER PIPE OD48 BASE w STRIPE SUPPORT	Grilon BG-30 S Natural black				1
31	Z1150015	3476531200	CABLE HOLDER PIPE OD48 COVER w STRIPE SUPPORT	Grilon BG-30 S Natural black				1
32	Z1150011	3484221500	EVC CABLE SUPPORT STRIPE METAL	-				1
33	Z1150338	3484221400	METAL CLAMP 57mm	-				1
34	Z1150342	3471848600	CABLE CLAMP EVC STRIPE END INSERT	Grilon BG-30 S Natural black				1
35	Z1150343	3471848700	CABLE CLAMP EVC STRIPE END	Grilon BG-30 S Natural black				1
40	Z1155057	3474253000	PLATE ADHESIVE PC 152.8*65*0.42 BLK	FORMEX GK + GLUE 3M467MP				2
41	-	3245568300	TAPE SPONGE EPDM 20*3 BLK	CAT. NO.: 1016-19			EMKA	1.5m

Figure 3. CMS SLIM100SPRING BOX: Package contents



ITEM NO.	PART NUMBER	DELTA SAP NUMBER	DESCRIPTION	MATERIAL	STOCK SIZE	WEIGHT	VENDOR	QTY.
4	Spring-fastening assembly-OD60mm-L400-V3-Packaging	3902547300	-	-				1
4.1	Spring subassembly 4.1 from wire D11 "Spring-assembly-OD60-V4"	3902539800	-	-				1
5	Belt-fastening-PEM-ver2	3902541100	-	-				1
6	Fastening-part1-door-PEM-ver2	3902543500	-	-				1
7	Fastening-part2-door-PEM-ver2	3902543600	-	-				1
19	Spring-fastener-OD60mm-V3	3902540300	-	-				1
20	Z1147721	3471848800	CABLE CLAMP EVC PIPE48 CABLE32 INSERT	Grilon BG-30 S Natural black				1
21	Z1147785	3471848900	CABLE CLAMP EVC PIPE48 CABLE32	Grilon BG-30 S Natural black				1
30	Z1150014	3476529800	CABLE HOLDER PIPE OD48 BASE w STRIPE SUPPORT	Grilon BG-30 S Natural black				1
31	Z1150015	3476531200	CABLE HOLDER PIPE OD48 COVER w STRIPE SUPPORT	Grilon BG-30 S Natural black				1
32	Z1150011	3484221500	EVC CABLE SUPPORT STRIPE METAL	-				1
33	Z1150338	3484221400	METAL CLAMP 57mm	-				1
34	Z1150342	3471848600	CABLE CLAMP EVC STRIPE END INSERT	Grilon BG-30 S Natural black				1
35	Z1150343	3471848700	CABLE CLAMP EVC STRIPE END	Grilon BG-30 S Natural black				1
40	Z115057	3474253000	PLATE ADHESIVE PC 152.8*65*0.42 BLK	FORMEX GK + GLUE 3M467MP				2
41	-	3245568300	TAPE SPONGE EPDM 20*3 BLK	CAT. NO.: 1016-19			EMKA	1.5m

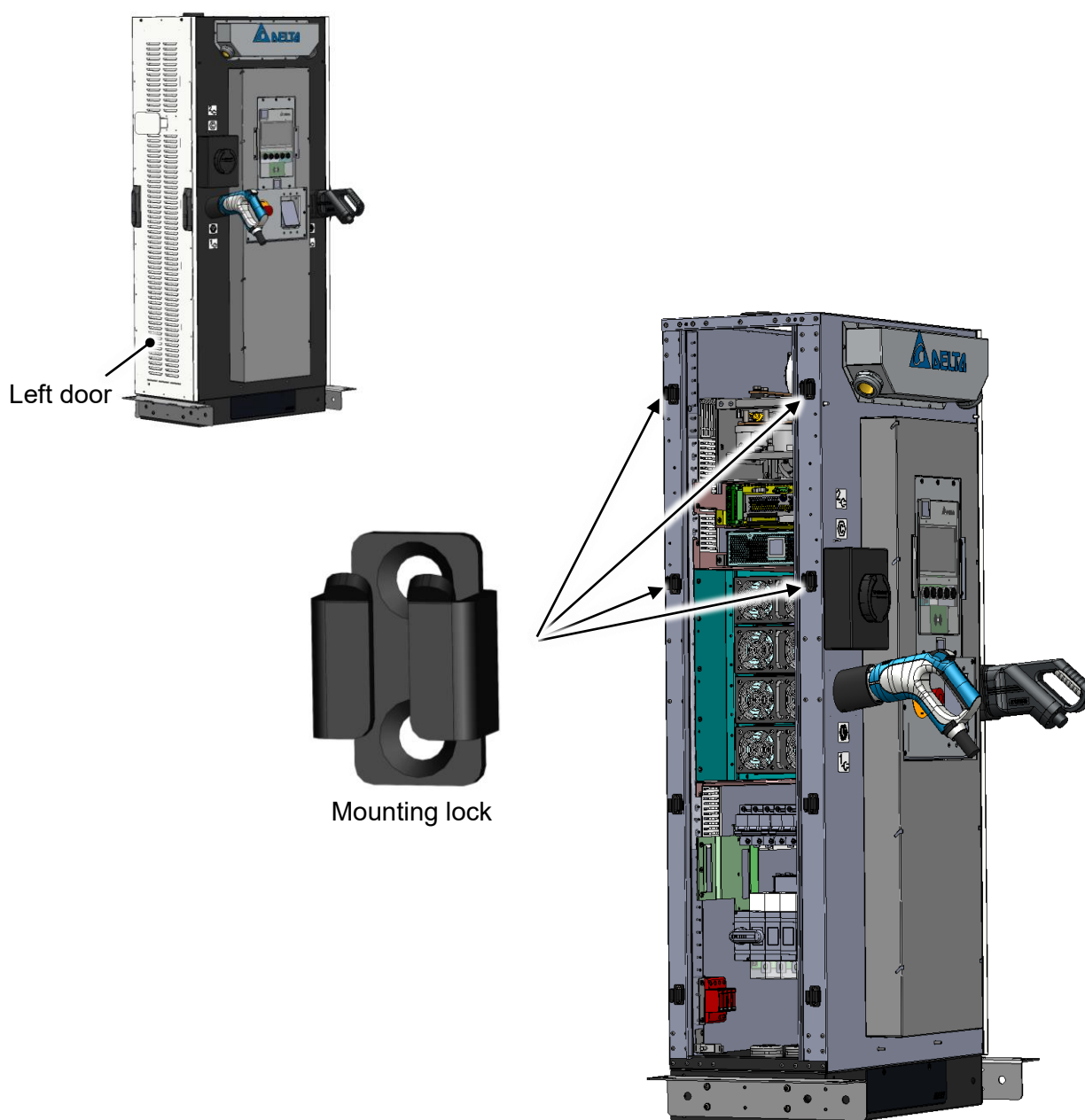
Figure 4. CMS SLIM100 SPRING BOX- longer version: package contents

4 Preparation of SLIM 100 (pre-facelift version) for CMS installation

For CMS installation, the SLIM 100 charger must be modified first by removing the old CMS. The following steps describe the modification process:

4.1 Drilling holes for new CMS

- Step 1 Remove the left door
- Step 2 Remove four upper mounting locks



Step 3 Mount the drilling plates to the SLIM100 frame using the screws which held the mounting locks in place. Pay attention to the proper orientation of the drilling templates (see figure below and on the next page for the reference)

Step 4 Drill fourteen holes with the diameter of 5,2mm using drilling templates as the guidance

Note! Carboards and kraft paper from CMS packing shall be used as protection under and behind drilled area to prevent metallic chips to get inside the cabinet and cause eventual short circuit.

Step 5 Remove the drilling plates

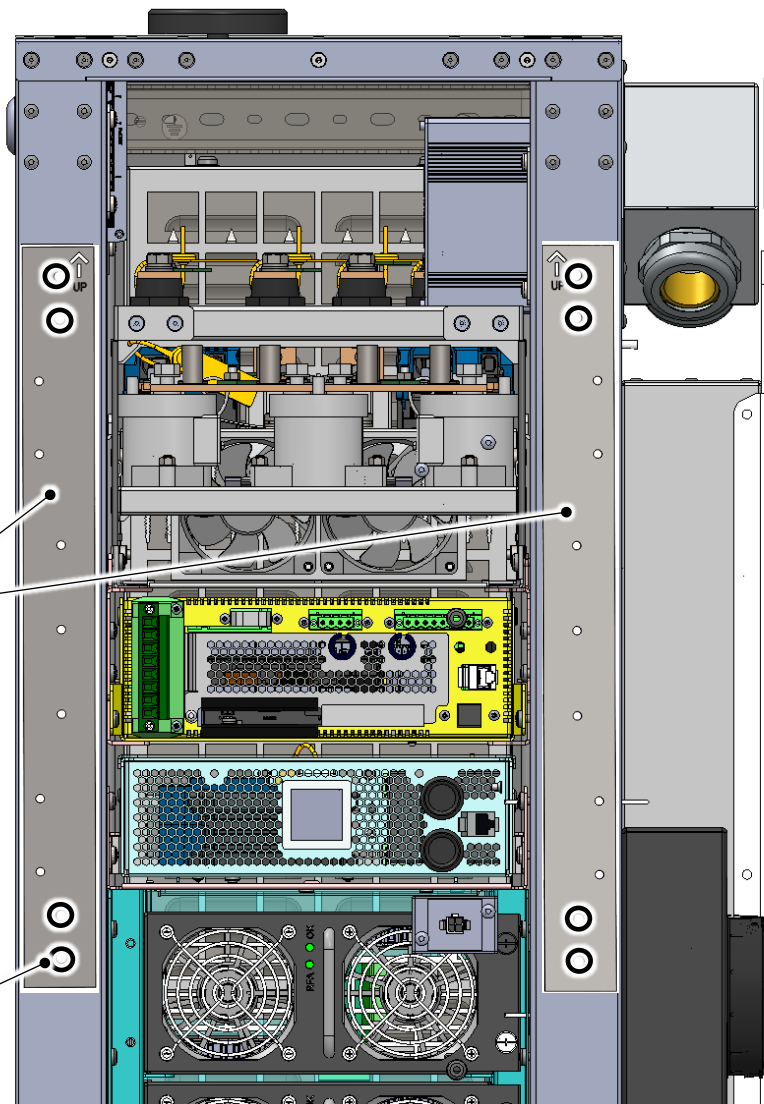
Step 6 Tap the M6 thread by the thread-forming screw

Important: Pay attention to the proper orientation of the drilling templates. The arrow symbol should point upwards. Also double-check the correct orientation of holes on the drilling plates.

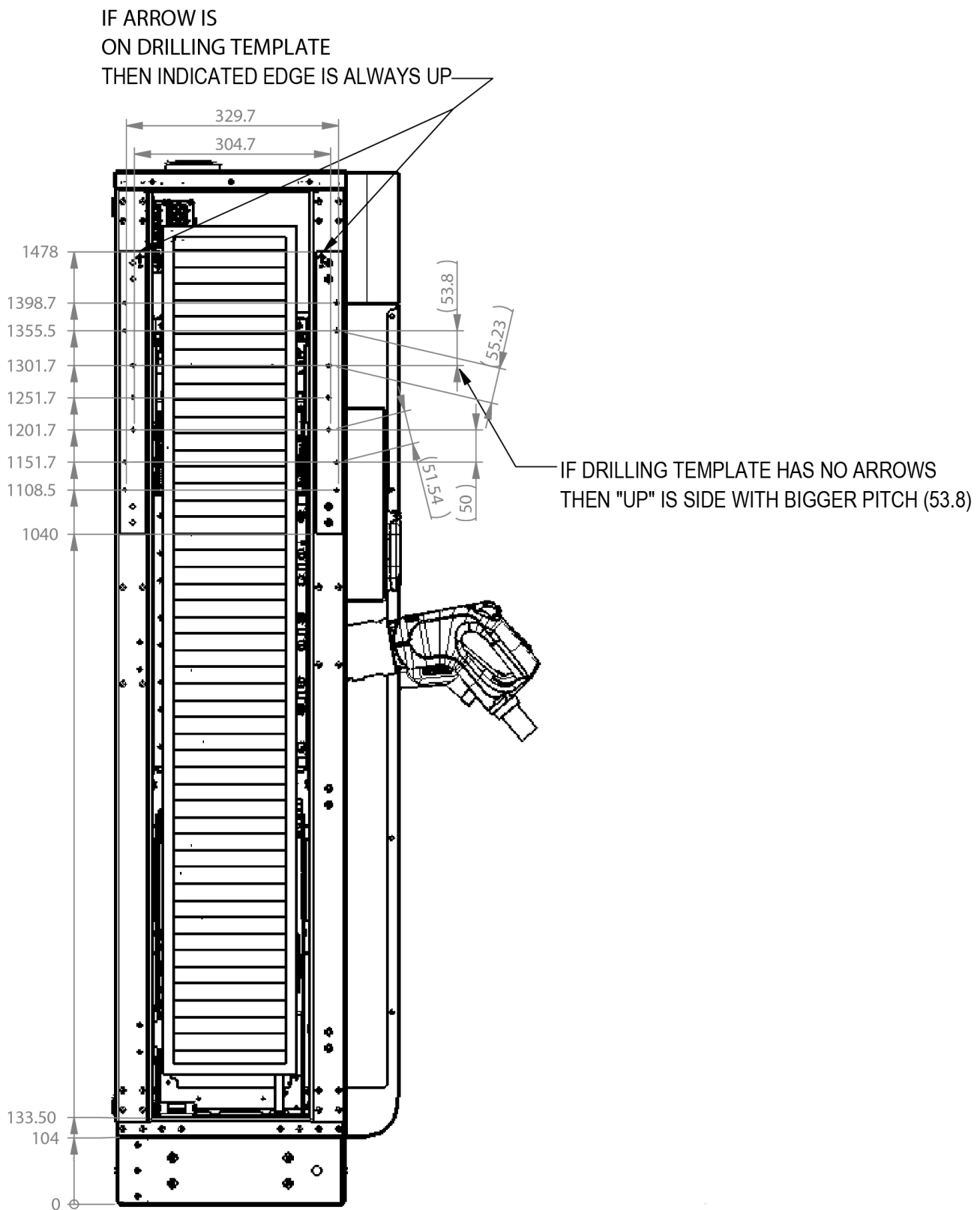
Note: There is version of drilling template without „arrow UP“ symbol. Use the drawing on the next page to help you to identify proper orientation of the left and the right drilling plate

Drilling plate
(PN: 3484310700)

Place the screws here to
secure the drilling plate in
place



Step 7 Repeat the steps 1 – 6 for the right-side drilling plate.



DIMENSIONS IN ITALIC ARE VALID FOR SHORT VARIANT OF CMS 3798107218-S

Figure 5. The correct position of drilling templates

5 Preparation of SLIM 100 (facelift version) for CMS installation

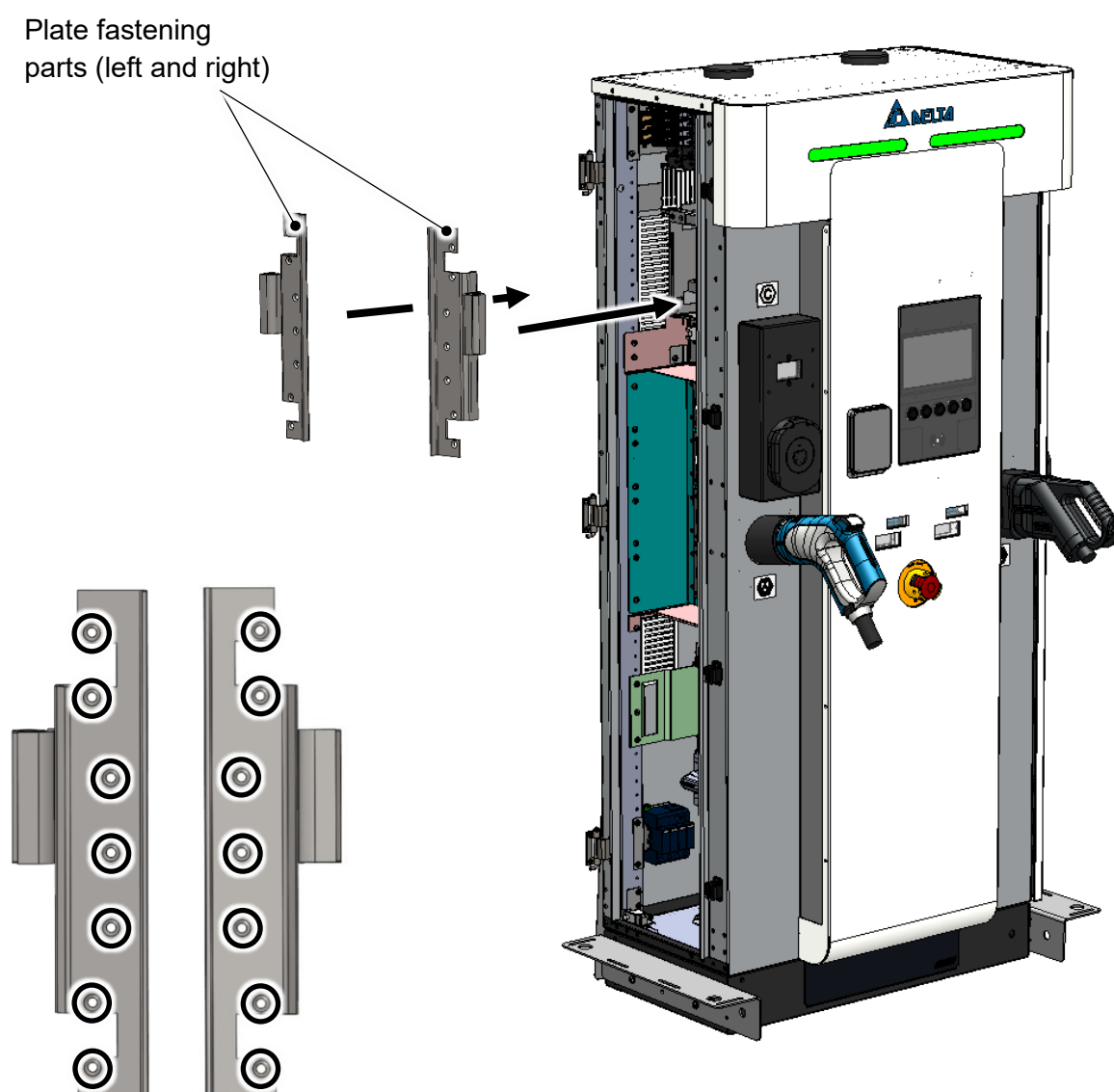
Note: Facelifted version of SLIM 100 charger comes with pre-drilled holes for CMS. There is no need to drill additional holes.

- Step 1 Remove the left door assembly by unscrewing two M5 HEX nuts from the hinge. There are three hinges in total



6 Installation of CMS to SLIM 100

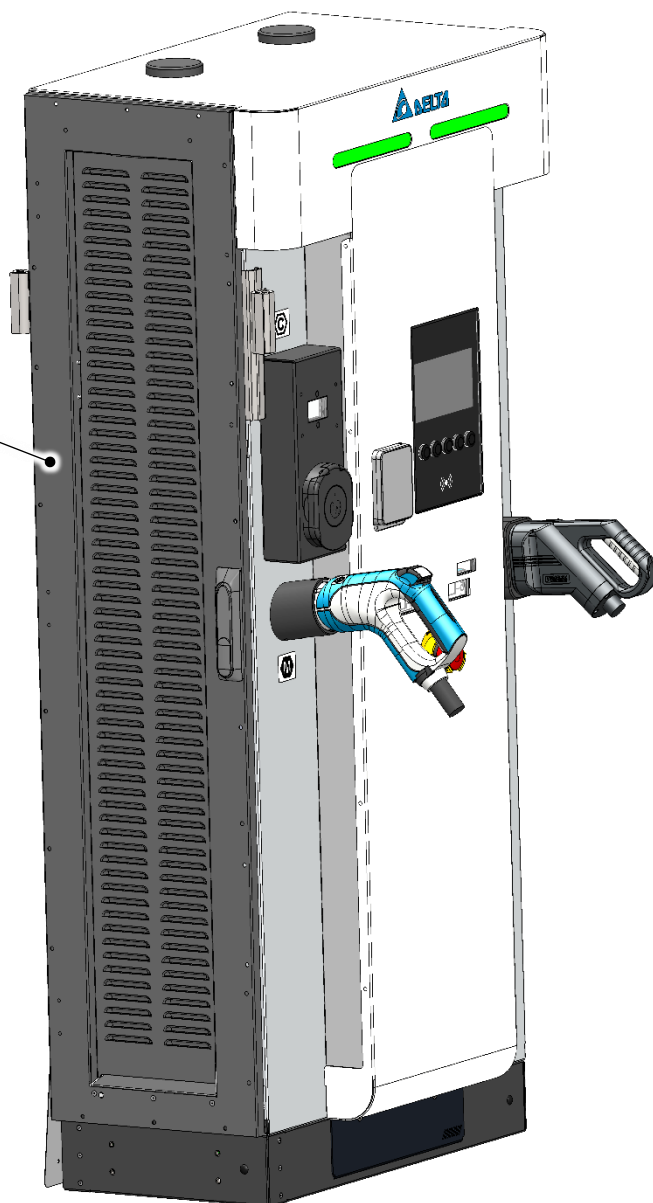
- Step 1 Attach left and right plate fastening parts to the SLIM 100. There is the array of pre-drilled holes for the plate fastening parts. Their orientation and mounting position is shown in the figure below.



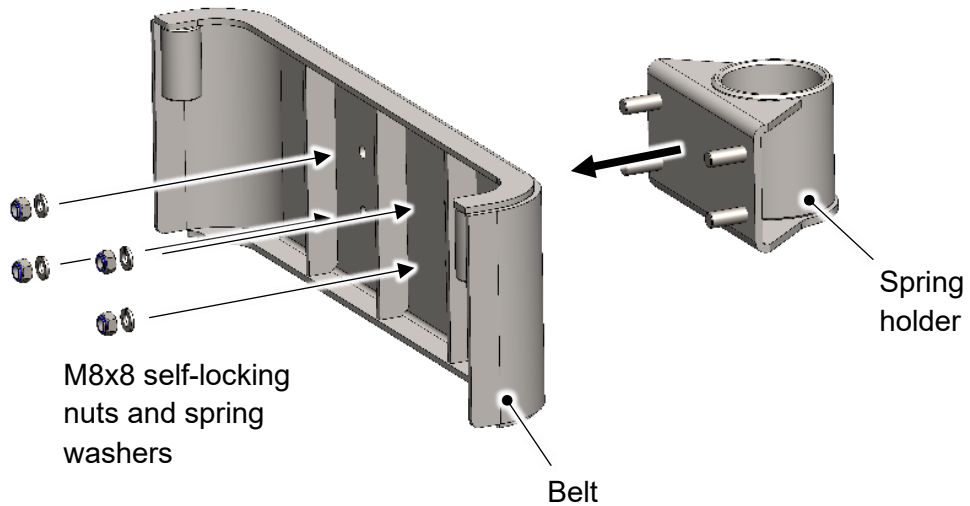
Position of mounting screws (Torx, M6x12, tightening torque 9,6Nm)

Step 2 Mount the left SLIM 100 door back and close them.

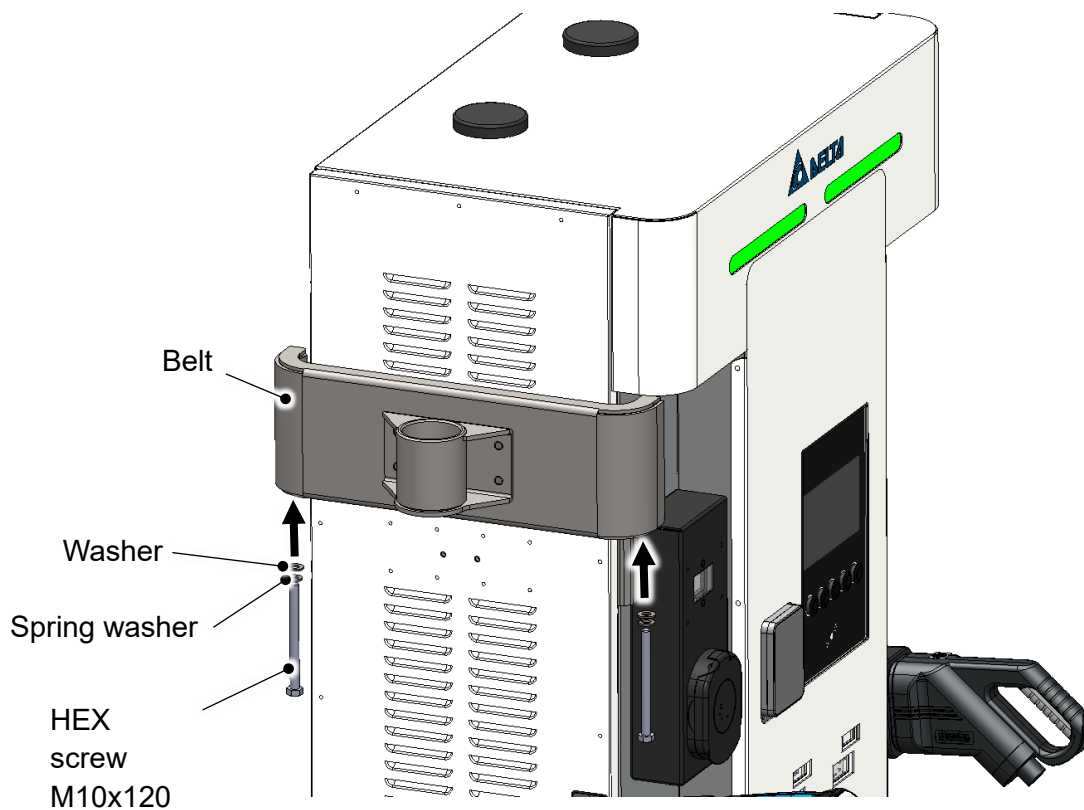
The left door
mounted back



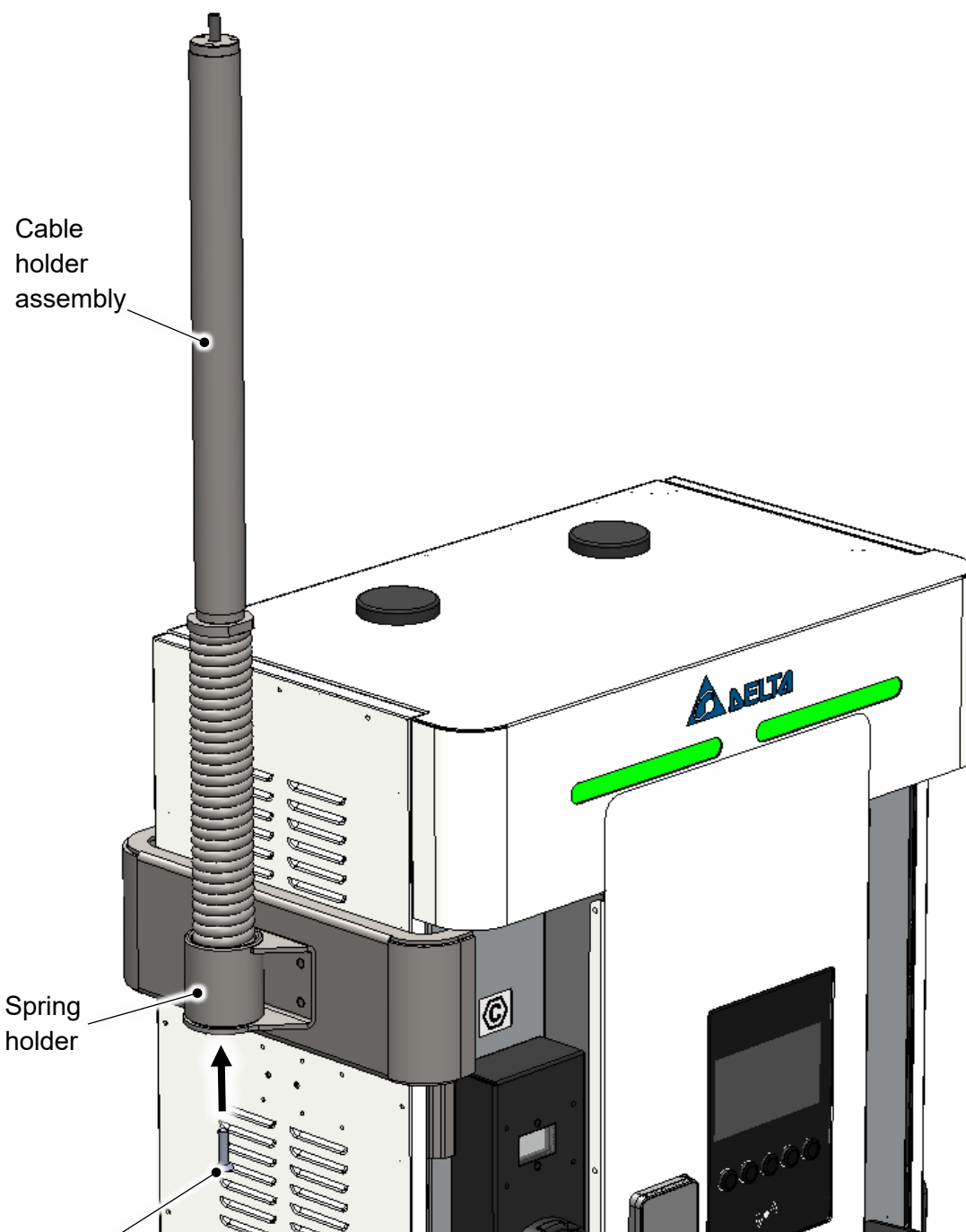
Step 3 Attach the spring holder to the belt using 4x M8x8 self-locking nut with the spring washer. Pay attention to the correct orientation of the belt relative to the spring holder. It should look like in the figure below.



Step 4 Attach the belt to the left and right holders installed in step 1. Use two M10x120 HEX screws with the spring washer and washer. Tightening torque 46Nm.

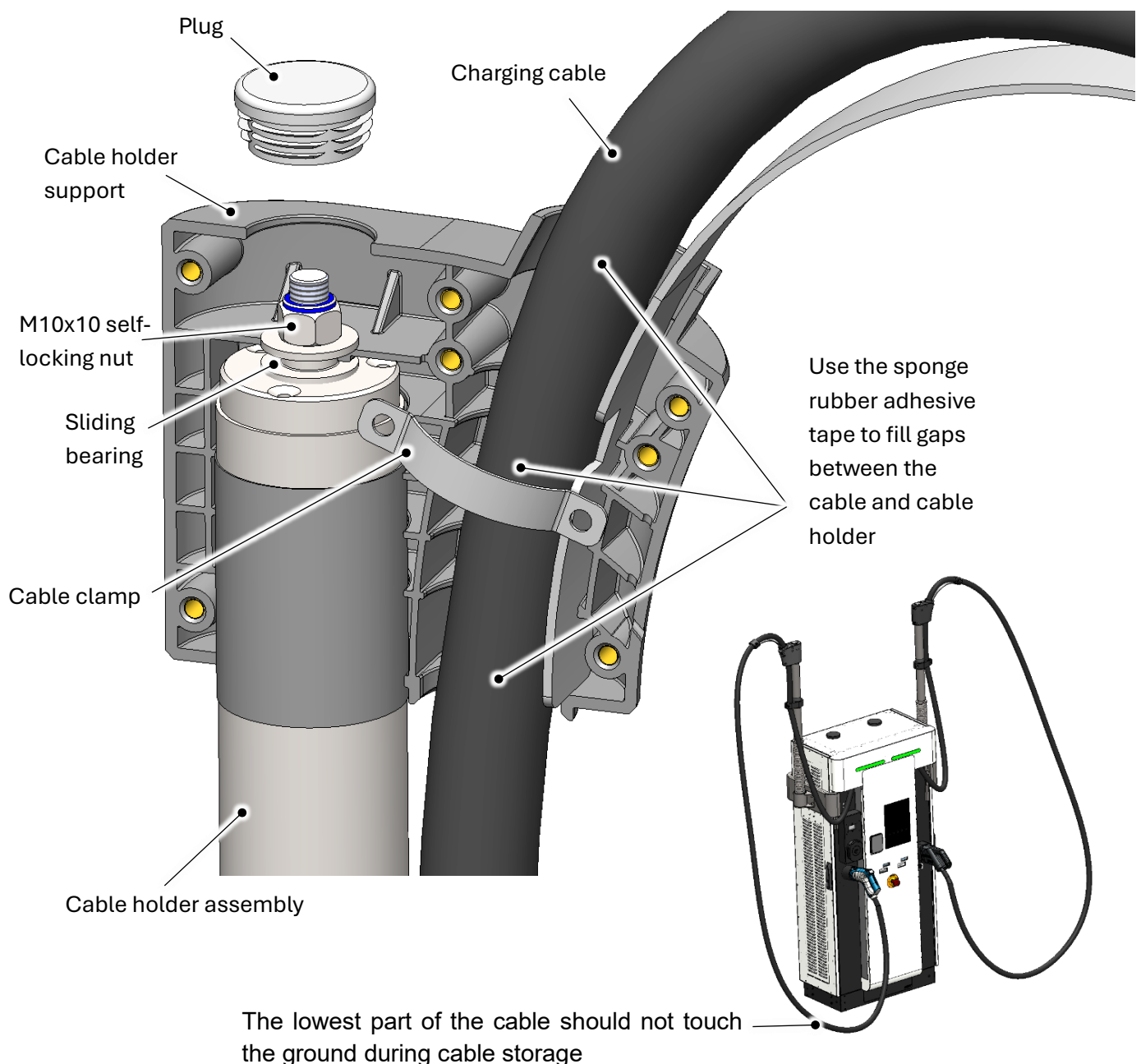


Step 5 Attach the cable holder assembly to the spring holder with M10 flat head screw. Tightening torque 46Nm.

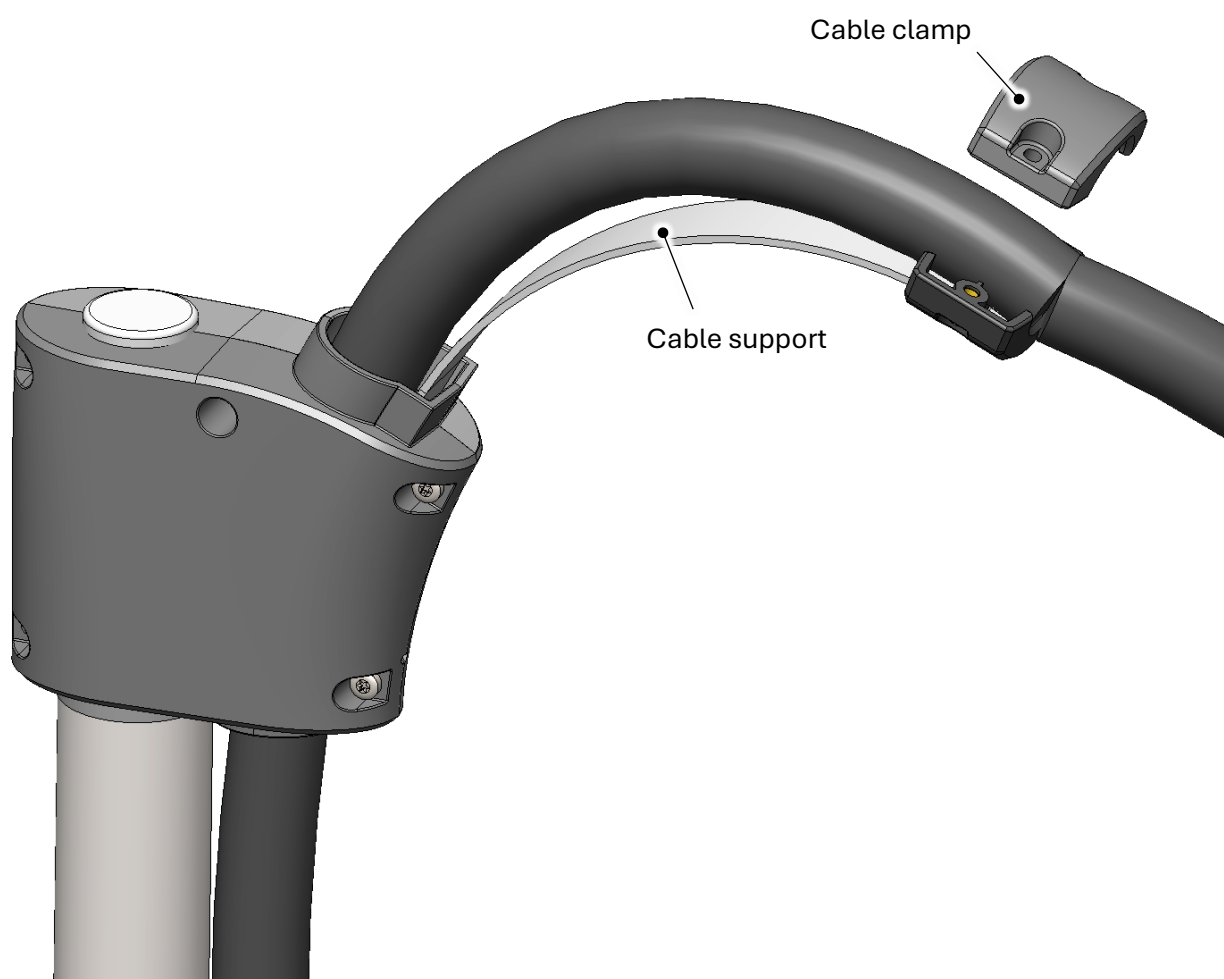


M10x40 Hexagon socket countersunk head screw

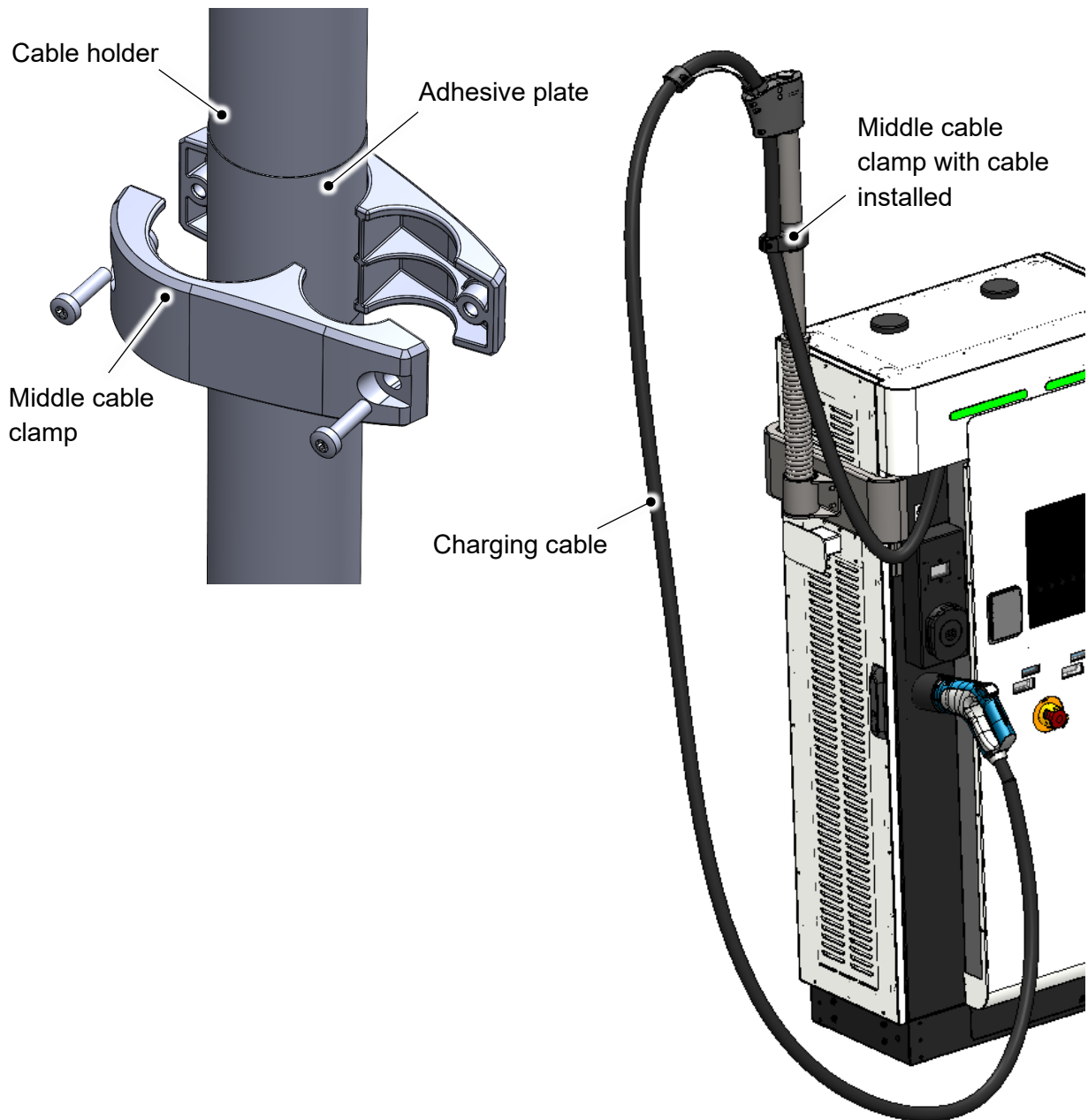
- Step 6 Determine the placement of the charging cable in the cable holder support. The proper placement of the charging cable in the CMS ensures that the lowest part of the cable will not touch the ground during cable storage
- Step 7 Wrap the sponge rubber adhesive tape around the cable (there are three positions where the adhesive tape should be placed, see figure below for reference)
- Step 8 Attach the cable to the cable holder support with the cable clamp
- Step 9 Insert the sliding bearing to the first half of the cable holder support with attached cable
- Step 10 Screw the second half of the cable holder support to its counterpart
- Step 11 Mount the cable holder support attached charging cable to the cable holder assembly using M10x10 nut
- Step 12 Cover the hole in the cable holder support with the plug



Step 13 Attach the cable support to the cable with the plastic cable clamp and two M5x16 Torx screws.



Step 14 Install the middle cable clamp to the cable holder. The middle clamp holder consists of two segments connected by two screws. Figure below shows installation principle and correct placement of the middle clamp holder as well as the charging cable routing.



Step 15 Repeat the installation process for the right-side CMS.

6.1 Final steps

- Step 1 After the CMS installation is finished, check the functionality of both cable holders. They must allow the charging cables to move freely. The springs of both holders must always return to initial position after the manipulation with the charging cable.
- Step 2 Clean the whole area, throw away the packaging material.

7 Maintenance

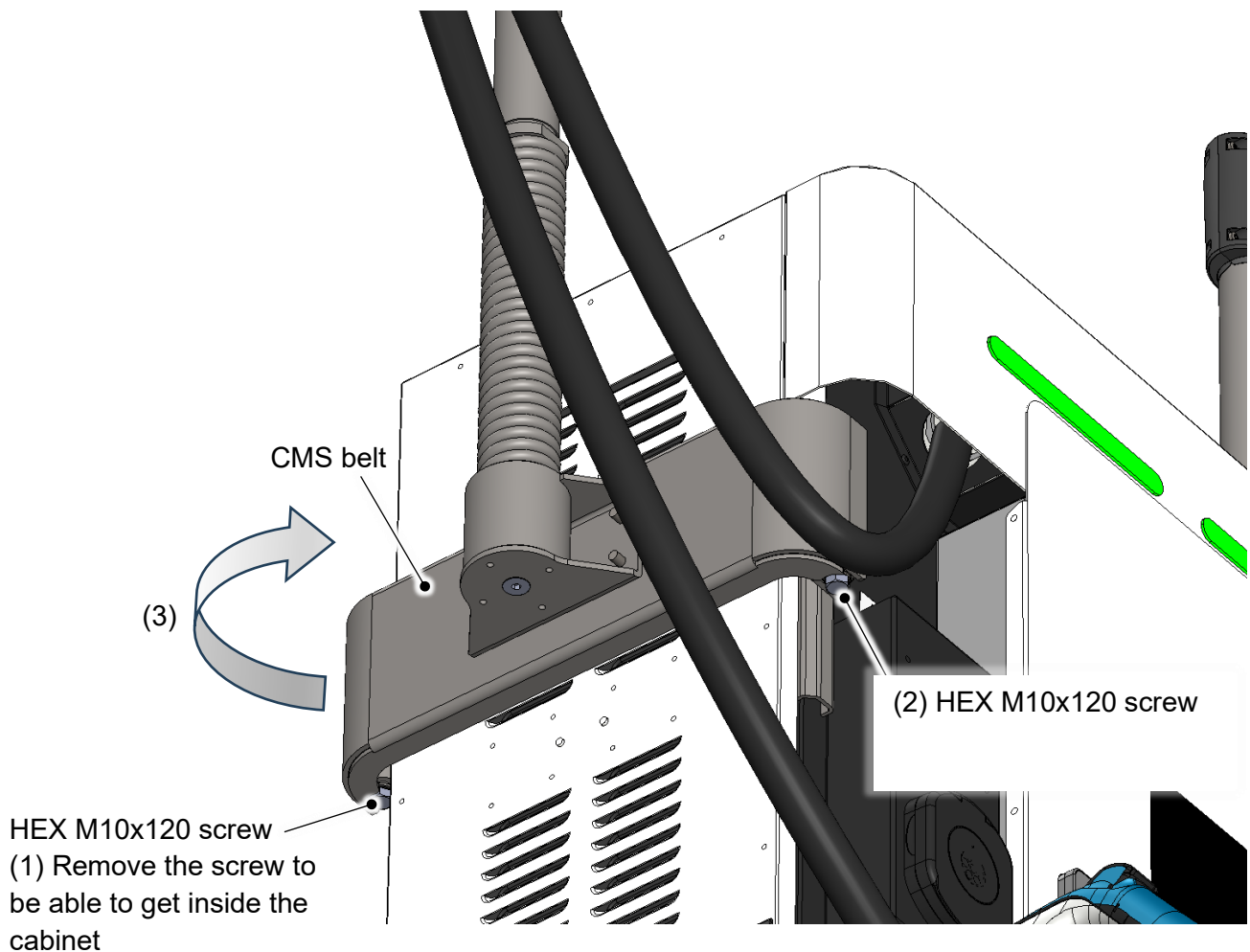
SLIM100 CMS is supposed to be maintenance-free. Maintenance per se is therefore reduced to replacing damaged parts and subassemblies.

During the regular charger maintenance, visually check the CMS on both sides:

- plastic parts (for signs of cracking),
- steel parts – for paint, scratches, signs of rust,
- screws - if they are not loosened nor damaged,
- spring - if it keeps original shape (no buckling / bending without external force) and if it is not loosened from spring fixation parts (risk it could suddenly fall-out),
- cables - if insulation is not damaged, not broken / bent with too small radius, not touching ground and if properly fixed in clamps.

If found damaged elements, order spare parts and replace it. Tight loosened screws /parts.

In case of need to get inside the cabinet, remove the M10 HEX-head screw (1) from the CMS hinge, loosen the second M10 HEX screw (2) and turn the CMS belt with rest of CMS assembly away (3).



8 Spare parts

Component	Description	Quantity
3902664900	SPRING FASTENING OD60 V4 ASSY	
3484178300	SPRING OD60 T11 V4 STEEL 60*385 COATED	1
3484178200	SPACER INSERT OD60V4 STEEL 63*55*52	2
3902540500	PIPE OD48 WITH PLUGS ASSY	1
3471848800	CLAMP CABLE EVC PIPE48 PA V-0	1
3471848900	CLAMP CABLE EVC PIPE48 PA V-0	1
3105381700	SCREW M M5*0.8*20 PAN POZ SUS	2
3476529800	HOLDER CABLE PIPE OD48 PA V-0	1
3476531200	HOLDER CABLE PIPE OD48 PA V-0	1
3233215800	GROMMET STEEL 25*10.5*8.7	1
3484221500	PLATE EVC CABLE SUP SUS	1
3484221400	CLAMP METAL 57MM SGCC 70*12*12*1	1
3471848600	CLAMP CABLE EVC STRIPE PA V-0	1
3471848700	CLAMP CABLE EVC STRIPE PA V-0	1
3105381700	SCREW M M5*0.8*20 PAN POZ SUS	2
3105701900	SCREW M M5*0.8*16 PAN TORX SUS	7
3231173200	GROMMET PE 36*12 BLK	1
3111111400	NUT HEXH+NYLON M10*10mm SUS	1
3105698300	SCREW M M10*1.5*40 FLAT HEXI ST10.9 ZN	1
3474253000	PLATE PC V-2 65*152.8*0.42 BLK	2
3245568300	SPONGE EPDM 20*3 BLK	1.5

Table 1: List of spare parts for longer CMS version

Component	Description	Quantity
3902664900	SPRING FASTENING OD60 V4 ASSY	
3484178300	SPRING OD60 T11 V4 STEEL 60*385 COATED	1
3484178200	SPACER INSERT OD60V4 STEEL 63*55*52	2
3902547300	PIPE OD48 SHORT WITH PLUGS ASSY	1
3471848800	CLAMP CABLE EVC PIPE48 PA V-0	1
3471848900	CLAMP CABLE EVC PIPE48 PA V-0	1
3105381700	SCREW M M5*0.8*20 PAN POZ SUS	2
3476529800	HOLDER CABLE PIPE OD48 PA V-0	1
3476531200	HOLDER CABLE PIPE OD48 PA V-0	1
3233215800	GROMMET STEEL 25*10.5*8.7	1
3484221500	PLATE EVC CABLE SUP SUS	1
3484221400	CLAMP METAL 57MM SGCC 70*12*12*1	1
3471848600	CLAMP CABLE EVC STRIPE PA V-0	1
3471848700	CLAMP CABLE EVC STRIPE PA V-0	1
3105381700	SCREW M M5*0.8*20 PAN POZ SUS	2
3105701900	SCREW M M5*0.8*16 PAN TORX SUS	7
3231173200	GROMMET PE 36*12 BLK	1
3111111400	NUT HEXH+NYLON M10*10mm SUS	1
3105698300	SCREW M M10*1.5*40 FLAT HEXI ST10.9 ZN	1
3474253000	PLATE PC V-2 65*152.8*0.42 BLK	2
3245568300	SPONGE EPDM 20*3 BLK	1.5

Table 2: List of spare parts for shorter CMS version



Delta Service Contacts

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Emobility.delta-emea.com

About Delta

Delta, founded in 1971, is a global leader in power and thermal management solutions. Our mission is “To provide innovative, clean and energy-efficient solutions for a better tomorrow,” and our businesses encompass Power Electronics, Energy Management, and Smart Green Life. Delta has sales offices, manufacturing facilities and R&D centers worldwide. In 2014, was ranked at the highest A-level of the Climate Performance Leadership Index of the Carbon Disclosure Project (CDP). Since 2011, Delta is part of the Dow Jones Sustainability Indices (DJSI) World Index.

